

WHAT IS CLAIMED IS:

1. A filter structure of a vehicle air conditioner comprising:
a filter cartridge provided with a plurality of filter papers that are
formed into a plurality of layers within a case;
5 a light source, provided at a position within the filter papers, for
radiating light toward one side of the case, the light being blocked at the position when
pollutants are deposited on the filter papers enough to cause a contaminated state of the
filer to reach a preset state; and
a display section, provided on the case, for transmitting the light
10 radiated from the light source to be checked on an external side with a naked eye.
2. A filter structure in accordance with claim 1, wherein the display
section comprises a base part made of a transmittable material and a checking part
formed with a color which is similar to that of the base part when light is transmitted,
15 but which is contrasted with that of the base part when light is not transmitted.
3. A filter structure in accordance with claim 1, wherein the case of the
filter cartridge is provided on one side with a first contact connected with the light
source, and a filter body into which the filter cartridge is detachably inserted is provided
20 with a second contact connected with a power source, so that when the filter cartridge is
inserted into the filter body, the first contact comes into contact with the second contact
to form a circuit connecting the light source to the power source.
4. A filter structure in accordance with claim 3, further comprising a

switch for opening/closing the circuit between the power source and the second contact.

5. A filter structure in accordance with claim 4, wherein the switch is turned on/off in a contactable manner by a pivot on a lower end of a lid of a glove box,
5 so that when the lid of the glove box is opened, the switch causes the circuit to be closed to supply power to the light source and wherein the display section is positioned on the inside beyond the glove box.

6. A vehicle air conditioning filter structure, comprising:
10 a filter cartridge housing a plurality of filter paper layers;
a light emitting member configured to transmit light through said filter paper layers toward an edge of said filter cartridge; and
a display section coupled with said filter cartridge and positioned to align with transmitting light such that a user can determine a contaminated state of the
15 filter paper.

7. The structure of claim 6, wherein said display section comprises multiple colored sections such that light emitting from the filter cartridge causes the colors to substantially match and when light is blocked from being emitted by a
20 contaminated filter, the colors substantially do not match.

8. The structure of claim 6, wherein the light emitting member is a light source housed within said plurality of filter paper layers of said filter cartridge.

9. The structure of claim 8, wherein the light source is a light bulb or a LED.

10. The structure of claim 6, further comprising a filter body configured
5 and dimensioned to receive said filter cartridge.

11. The structure of claim 10, wherein the filter cartridge further comprises a first electrical contact and the filter body further comprises a second electrical contact, said first electrical contact and said second electrical contact being configured and
10 dimensioned to complete a circuit when said filter cartridge is received by said filter body.

12. The structure of claim 6, further comprising a switch configured and dimensioned to activate said light emitting member.

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13. The structure of claim 12, wherein said switch is activated by opening and closing a glove box door of the vehicle.